

Remarks

Claims 1 and 3-12 are pending in the application. Claims 1, 3-9, 11 and 12 have been rejected under 35 U.S.C. § 103(a) on various grounds. In view of the following remarks, reconsideration and withdrawal of these grounds of rejection is requested.

Examiner Interview

Applicant sincerely thanks Examiner Crepeau for the courtesy of the Interview conducted on September 10, 2003. During the Interview, the Examiner and Applicant's representative (Gambino) discussed the merits of the § 103(a) rejection of claim 1 of European Patent EP 0 658 949 B1 (the "EP Patent") in view of German Patent Application DE 198 38 121 A1 (the "German Application"). Applicant's representative pointed out that the German Application fails to disclose or suggest "a metallic region which is free of active material, and extends over about 5 to about 15%, of the total thickness of the positive electrode", as recited in claim 1 (emphasis added). The Examiner agreed and requested that Applicant file remarks highlighting this point. Accordingly, the present After Final Response was filed.

§ 103 Rejections

Claims 1 and 3 stand rejected under 35 U.S.C. § 103(a) as being obvious over European Patent EP 0 658 949 B1 (the "EP Patent") in view of German Patent Application DE 198 38 121 A1 (the "German Application"). For the reasons set forth below, reconsideration and withdrawal of this ground of rejection is respectfully requested.

The present invention comprises, in one exemplary embodiment, a button cell 100 including a cell cup 1, a cell cover 2, a positive electrode 4, and a negative electrode 5 (See Fig.

1). The positive electrode 4 is formed by impregnating a nickel foam support framework with an active material, such as a nickel hydroxide paste (see, page 3, lines 12-22). The active material (paste) is impregnated in such a way that the resulting positive electrode 4 has a overall region, in the range of 5—15% of the total thickness of the electrode, which is free of the active material (paste).

Independent claim 1 recites:

A gastight-sealed alkaline nickel/metal hydride button cell storage battery comprising positive and negative electrodes arranged in a button cell case and separated by a separator, wherein both electrodes have a support and conductor framework, which includes a porous metal foam or metal felt, and wherein the positive electrode contains active material, but on a side bearing against the cell case, has a metallic region which is free of active material, and extends over about 5 to about 15%, of the total thickness of the positive electrode. [emphasis added].

Thus, claim 1 specifically recites that a “region” of the positive electrode is free of active material, such region extending “about 5 to about 15%, of the total thickness of the positive electrode.” As discussed in detail below, neither the EP Patent nor the German Application disclose or suggest such a device.

The EP Patent teaches a button cell 1 which includes a positive electrode 4 made of an open-pore nickel foam, and a negative electrode 6 (See Fig. 1). As correctly pointed out by the Examiner at page 2 of the present Office Action, the EP Patent fails to disclose or suggest a positive electrode with a region free of active material.

The German Application teaches a process for producing an accumulator which involves, in one intermediate step, removing a coating of excess active material from the entire outer surface of an electrode formed of metal coated synthetic fibers (See Abstract). After the active material is removed from the outer surface of the electrode, there is no portion of the electrode

which is “free of active material” as required by claim 1; the remaining electrode is comprised of 100% active material and metal coated synthetic fibers.

The German Application fails to disclose or suggest a storage battery with positive and negative electrodes, wherein the “positive electrode” includes a “metallic region which is free of active material, and extends over about 5 to about 15%, of the total thickness of the positive electrode”, as recited in claim 1.

Therefore, for the reasons discussed above, reconsideration and withdrawal of this ground of rejection with respect to claim 1 and 3 is respectfully requested.

Claims 4-6 stand rejected under 35 U.S.C. § 103(a) as being obvious over the EP Patent in view of the German Application, and further in view of Japanese Patent JP 61-216629 (the “Japanese Patent”). For the reasons set forth below, reconsideration and withdrawal of this ground of rejection is respectfully requested.

As discussed above, neither the EP Patent nor the German application disclose or suggest a storage battery with positive and negative electrodes, wherein the positive electrode includes a “metallic region which is free of active material, and extends over about 5 to about 15%, of the total thickness of the positive electrode”, as recited in claim 1. Since claims 4-6 are all dependent upon claim 1, reconsideration and withdrawal of this ground of rejection is also requested.

Claims 7-9 stand rejected under 35 U.S.C. § 103(a) as being obvious over the EP Patent in view of the German Application, and further in view of Hara et al. (U.S. Pat. No. 4,587,180). For the reasons set forth below, reconsideration and withdrawal of this ground of rejection is respectfully requested.

As discussed above, neither the EP Patent nor the German application disclose or suggest

a storage battery with positive and negative electrodes, wherein the positive electrode includes a “metallic region which is free of active material, and extends over about 5 to about 15%, of the total thickness of the positive electrode”, as recited in claim 1. Since claims 7-9 are all dependent upon claim 1, reconsideration and withdrawal of this ground of rejection is also requested.

Claims 11 and 12 stand rejected under 35 U.S.C. § 103(a) as being obvious over the EP Patent in view of the German Application, and further in view of Kohler et al. (U.S. Pat. No. 5,800,947) and Sugalski (U.S. Pat. No. 4,529,675). For the reasons set forth below, reconsideration and withdrawal of this ground of rejection is respectfully requested.

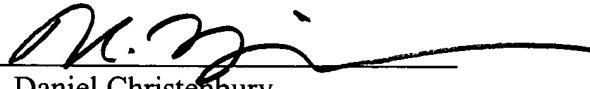
As discussed above, neither the EP Patent nor the German application disclose or suggest a storage battery with positive and negative electrodes, wherein the positive electrode includes a “metallic region which is free of active material, and extends over about 5 to about 15%, of the total thickness of the positive electrode”, as recited in claim 1. Since claims 11 and 12 are both dependent upon claim 1, reconsideration and withdrawal of this ground of rejection is also requested.

Summary

In view of the foregoing remarks, Applicants submit that this application is in condition for allowance at an early date, which action is earnestly solicited.

Respectfully submitted,

9.17.03
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